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University of California
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Berkeley, California

SEASONAL LABOR NEEDS FOR CALIFORNIA CROPS

SANTA CLARA COUNTY

Progress Report No. 43

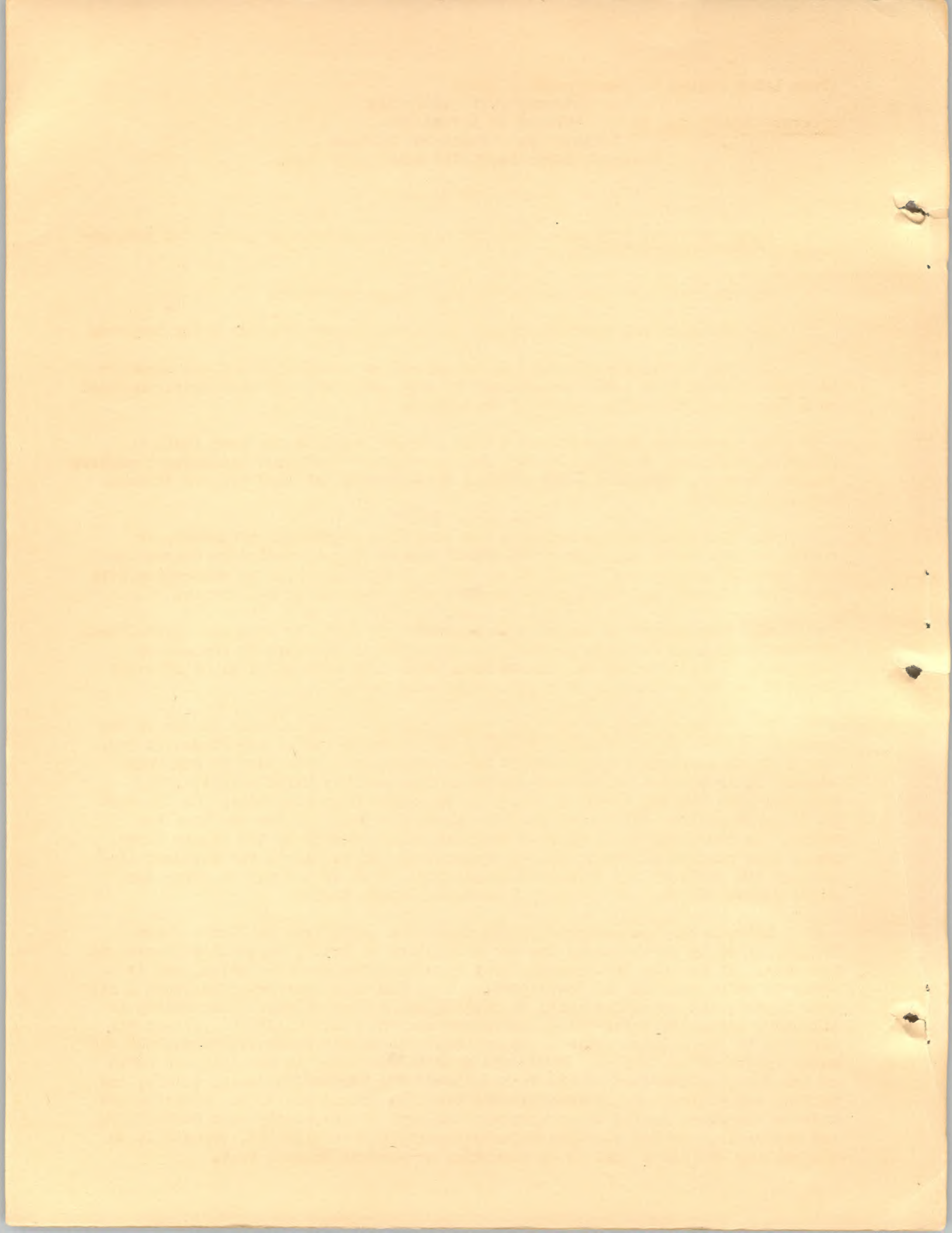
by

R. L. Adams

October, 1936

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Progress Report No. 43

Seasonal Labor Needs for California Crops

Santa Clara County

Scope of Presentation.-- The following considerations govern the presentation of this progress report:

1. The data are confined to the area indicated above.
2. The data are confined solely to crops, livestock needs being ignored.
3. The findings apply only to occasional or seasonal labor requirements as distinguished from labor contributed by farm operators and by workers employed on a year-round or regular basis of employment.
4. Attention is concentrated upon workers required for hand tasks -- planting, thinning, weeding, hoeing, and harvesting -- without including teamsters, tractor drivers, irrigators, hay balers, threshermen, and shed packers of vegetables or fruits.
5. The presentation includes the so-called migratory, transient, or roving workers which comprise an important source of help needed in connection with certain tasks and at "peak" times which seasonally arise in connection with many field, truck, and fruit crops commercially produced in California.
6. This report is confined to California's need for seasonal agricultural workers because of the more pressing problems liable to arise in connection therewith. A later study is planned which will deal with other kinds of labor involved in the production of California's many crops.

Brief Description of the Area Under Review.-- Santa Clara is one of the central counties of California, lying at the southern end of San Francisco Bay, its northern boundary being about 30 miles southeast of the city of San Francisco. It is bounded on the west by Santa Cruz and San Mateo counties, the dividing line running along the crest of the Santa Cruz Mountains. On the east it joins Stanislaus and Merced counties along the ridge of the Mt. Hamilton range. On the south it is divided from San Benito County by the Pajaro River, and a line running easterly into the mountains. On the north the boundary line crosses the southern tip of San Francisco Bay. West of the Bay it joins San Mateo County and east of the Bay it borders Alameda County.

Between the two mountain ranges mentioned above lies the Santa Clara Valley, which is world famous for its production of fruit, especially prunes and apricots. It extends in a southeasterly direction for about 50 miles, and is about 12 miles wide in the lower portion near San Jose, narrowing to about 1 mile near Coyote, and expanding again to about 6 miles near Gilroy. This valley is all under intensive cultivation, and comprises the most important agricultural district in the county. Prunes and apricots are raised generally throughout the whole length of the valley. Pears are grown extensively in the district north of San Jose, as are most of the apples also. Raspberries, spinach, celery, and various other crops occupy considerable acreages around San Jose. Cherries and walnuts are found mostly in the northwestern part of the county near Santa Clara and Sunnyvale. Spring peas are grown extensively near Milpitas, especially on the rolling and hilly land to an elevation of several hundred feet.

Seasonal Labor Needs for California Crops

San Joaquin County

Scope of Presentation.-- The following considerations govern the presentation of this progress report:

1. The data are confined to the area indicated above.
2. The data are confined solely to crops, livestock needs being ignored.
3. The findings apply only to occasional or seasonal labor requirements as distinguished from labor contributed by farm operators and by workers employed on a year-round or regular basis of employment.
4. Attention is concentrated upon workers required for hand tasks -- planting, thinning, weeding, hoeing, and harvesting -- without including farmstead tractor drivers, irrigators, hay balers, thrashers, and shed workers or workers on fruit or nut trees.
5. The presentation includes the so-called migratory, transient, or roving workers which comprise an important source of help needed in connection with certain tasks and at "peak" times which seasonally arise in connection with many field, truck, and fruit crops commercially produced in California.
6. This report is confined to California's need for seasonal agricultural workers because of the more pressing problems liable to arise in connection therewith. A later study is planned which will deal with other kinds of labor involved in the production of California's many crops.

Brief Description of the Area Under Review.-- San Joaquin is one of the central counties of California, lying at the southern end of San Francisco Bay. Its northern boundary being about 30 miles southeast of the city of San Francisco. It is bounded on the west by Santa Clara and San Mateo counties; the dividing line running along the crest of the Santa Cruz Mountains. On the east it joins Stanislaus and Merced counties along the ridge of the Mt. Hamilton range. On the south it is divided from San Bernardino County by the Colorado River and a line running easterly into the mountains. On the north the boundary line crosses the southern tip of San Francisco Bay. West of the Bay is Contra Costa County and east of the Bay is Alameda County.

Between the two mountain ranges mentioned above lies the Santa Clara Valley, which is world famous for its production of fruit, especially grapes and apricots. It extends in a southeasterly direction for about 80 miles, and is about 12 miles wide in the lower portion near San Jose, narrowing to about 1 mile near Coyote, and expanding again to about 6 miles near Gilroy. This valley is all under intensive cultivation, and comprises the most important agricultural district in the country. Grapes and apricots are raised generally throughout the whole length of the valley. Pears are grown extensively in the district north of San Jose, as are most of the apples. Raspberries, spinach, celery, and various other crops occupy considerable tracts around San Jose. Grapes and walnuts are found mostly in the northernmost part of the county near Santa Clara and San Gabriel. Spring pears are grown extensively near Milpitas, especially on the rolling and hilly land to an elevation of several hundred feet.

The county contains a total of 849,920 acres, of which 218,267 acres are classed as available for crops by the 1935 Census. This is further classified as follows by the Census for the crop year 1934.

Crop land harvested	175,750 acres
Crop failure	1,206 acres
Crop land idle or fallow	7,035 acres
Plowable pasture	<u>34,276 acres</u>

Total land available for crops 218,267 acres

Crop acreages in 1935 are estimated to have been as follows:

Field crops	45,330 acres
Vegetable crops	19,097 acres
Fruits and berries	<u>109,000 acres</u>
Total	173,427 acres

The farming area in the Santa Clara Valley ranges in elevation from practically sea level near Alviso, to about 400 feet near Morgan Hill, being mostly under 200 feet. Various soils are represented, six soil series being noted, and twelve or more soil types. The predominating textures are the heavier phases, ranging from loams and gravelly loams to clays and clay adobes, practically all 6 feet or more in depth.

Crops, Acreage, and Production.-- The basis used in calculating occasional or seasonal need for labor in addition to that furnished by farm operators and regularly employed workers appears as table 1.

TABLE 1

Basis for Calculating Seasonal Labor Requirements -- Santa Clara County

Crops		Acreages	Production
Field crops:*			
Grain -- wheat		609	10,971 bushels
oats		408	9,801 bushels
barley		5,303	80,771 bushels
Garlic†		415	20,750 hundredweight
Hay -- alfalfa		6,699	27,252 tons
grain		22,728	27,783 tons
other hay		6,825	8,607 tons
Potatoes (Irish)		257	25,353 bushels
Sugar beets		2,086	24,730 tons
Vegetable crops:†			
String beans --	market	spring 200)	1,800 tons
		fall 200)	
	canning	460	2,180 tons
Cabbage		100	--
Cauliflower (fall and winter 500)		650	130,000 crates
(spring 150)			
Celery (fall and winter 800)		1,000	400,000 crates
(summer 200)			
Cucumbers -- pickling		265	1,855 tons

Table 1 continued on next page.

The county contains a total of 842,850 acres, of which 218,287 acres are classed as available for crops by the 1935 Census. This is further classified as follows by the Census for the crop year 1934:

178,780 acres	Crop land harvested
1,308 acres	Crop fallow
7,088 acres	Crop land idle or fallow
34,276 acres	Plomble pasture
218,287 acres	Total land available for crops

Crop averages in 1935 are estimated to have been as follows:

48,850 acres	Field crops
12,087 acres	Vegetable crops
109,000 acres	Fruits and berries
175,427 acres	Total

The farming upon in the Santa Clara Valley ranges in elevation from practically sea level near Alviso, to about 400 feet near Morgan Hill, being mostly under 300 feet. Various soils are represented, six soil series being noted, and two or more soil types. The predominant textures are the heavier phases, ranging from loam and gravelly loam to clay and clay shales, practically all 6 feet or more in depth.

Crops, Averages, and Production. -- The basis used in calculating seasonal or seasonal need for labor in addition to that furnished by farm operators and regularly employed workers appears as table 1.

TABLE 1

Basis for Calculating Seasonal Labor Requirements -- Santa Clara County

Crops	Averages	Production
Field crops		
Grain -- wheat	808	10,871 bushels
oats	408	9,801 bushels
barley	8,808	80,771 bushels
Garlic	418	80,780 hundredweight
Hay -- alfalfa	8,098	27,288 tons
Grain	25,738	27,782 tons
other hay	8,828	8,807 tons
Potatoes (Irish)	257	25,222 bushels
Sugar beets	2,088	24,730 tons
Vegetable crops:		
String beans -- market	300	1,800 tons
String beans -- fall	300	2,188 tons
spinach	480	100
Cabbage	100	150,000 crates
Cauliflower (fall and winter 500)	850	400,000 crates
(spring 150)		
Celery (fall and winter 500)	1,000	1,888 tons
(summer 300)		
Cucumbers -- pickling	258	

Table 1 continued on next page.

Table 1 continued.

3.

Crops	Acreage	Production
Vegetable crops: (continued)		
Lettuce (spring 100) (fall 100)	200	--
Peas (spring 2,000) (fall 2,200)	4,200	420,000 hampers
Peppers -- bell	300	120,000 crates (60 to 80 pounds)
Spinach -- canning	3,109	15,545 tons
Strawberries†	285	228,000 crates
Tomatoes -- market	100	15,000 lugs
canning	8,028	40,140 tons
Fruit crops: ‡		
Almonds	223	--
Apples	843	8,430 tons
Apricots	18,191	42,000 tons
Cherries	2,077	2,000 tons canned 2,000 tons shipped
Grapes (wine varieties)	6,639	13,278 tons
Peaches -- clingstone	363	1,500 tons
freestone	1,062	4,248 tons
Pears § -- Bartlett	4,956	24,000 tons canned 375 tons dried (dry weight)
other varieties	2,443	350,000 boxes of 50 pounds net
Plums	1,575 ¶	300 tons (mostly noncommercial)
Prunes	64,372	93,000 tons (dried weight)
Walnuts	5,385	1,775 tons
Raspberries	700	700,000 crates
Bushberries	125	
Seed crops: (Complete data on these crops are not yet available, but will be included later, when this report is revised.)		

* Acreage and production of field crops, except garlic and sugar beets, are from the 1935 Census, for the crop year 1934. No data are available for 1935.

† The acreage of vegetable crops, garlic, and strawberries is from the Federal-State Crop Reporting Service, Sacramento. Production is estimated from average yields. Of the strawberry acreage, about 200 acres are bearing. Yield estimated at 1,200 crates per acre on two-thirds of acreage.

‡ Acreage of fruit crops is from L. R. Cody, Agricultural Commissioner of Santa Clara County. Production is estimated from average yields, in most cases.

§ Pear production estimated as follows:

350,000 boxes shipped, average 50 pounds	8,750 tons
375 tons (dry weight) dried	1,875 tons green
Tonnage canned	<u>24,000 tons</u>
Total pear production	34,625 tons

¶ While the acreage in plums is given as 1,575, it is probable that most of this is either noncommercial, or varieties dried as prunes. Commercial plum acreage harvested for sale as fresh fruit is probably about 50 acres.

Crops	Percentage	Production
Vegetable crops: (continued)		
Lettuces (spring 100)	100	--
(fall 100)		
Pears (spring 2,000)	4,300	420,000 bushels
(fall 2,500)		
Peppers -- bell	300	120,000 crates (50 to 80 pounds)
Spinach -- cutting	2,102	12,242 tons
Strawberries†	222	222,000 crates
Tomatoes -- market	100	12,000 bags
canning	2,022	40,140 tons
Fruit crops: ‡		
Almonds	222	--
Apples	242	2,420 tons
Apricots	12,121	42,000 tons
Cherries	2,077	2,000 tons canned
		2,000 tons shipped
Grapes (wine varieties)	2,222	12,272 tons
Peaches -- clingstone	222	1,200 tons
freestone	1,022	4,222 tons
Pears § -- Bartlett	4,222	24,000 tons canned
		272 tons dried
Other varieties	2,442	220,000 boxes of 50 pounds net
Pines	1,272	200 tons (mostly noncommercial)
Pistons	24,272	22,000 tons (dried weight)
Walnuts	2,222	1,772 tons
Raspberries	702	700,000 crates
Strawberries	122	
Good crops: (Complete data on these crops are not available, but will be included later when this report is revised.)		

* Average and production of field crops, except garlic and sugar beets, are from the 1922 Census, for the crop year 1922. No data are available for 1922.

† The average of vegetable crops, garlic, and strawberries is from the Federal-State Crop Reporting Service, Sacramento. Production is estimated from average yields. Of the strawberry average, about 200 acres are bearing. Yields estimated at 1,200 crates per acre on two-thirds of average.

‡ Average of fruit crops is from L. R. Gedy, Agricultural Commissioner of Santa Clara County. Production is estimated from average yields, in most cases.

§ Pear production estimated as follows:

320,000 boxes shipped, average 50 pounds	8,750 tons
272 tons (dry weight) dried	1,272 tons green
Tomatoes canned	24,000 tons
Total pear production	24,222 tons

¶ While the average for pines is given as 2,442, it is probable that most of this is other noncommercial, or varieties dried as nuts. Commercial pines are harvested for sale as fresh fruit in probably about 50 acres.

// Acreages of raspberries and bushberries are estimates by Central California Berry Growers Association.

Operations Requiring Use of Seasonal Labor and Time of Need.-- Farm operations requiring the use of seasonal or occasional labor for the various crops raised in Santa Clara County are indicated in table 2. This tabulation does not include the employing of shed workers needed to wash, pack, and prepare various commodities for shipping and marketing.

TABLE 2

Operations Requiring Use of Seasonal Labor and
Times of Needs by Crops -- Santa Clara County

Crop	Operation	Time of need
Field crops:		
Garlic	Planting	December -- 75 per cent of acreage January -- 25 per cent of acreage
	Hoeing (first time)	February -- 25 per cent of acreage
	(second time)	March -- 75 per cent of acreage April -- 50 per cent of acreage May -- 50 per cent of acreage
	Pulling and piling	June -- 25 per cent of acreage August -- 75 per cent of acreage
	Topping and sacking	June -- 20 per cent of crop August -- 80 per cent of crop
Grain (wheat, barley, oats)	Harvesting with "combine" -- 50 per cent by seasonal workers	June 20-30 -- 20 per cent of acreage July 1-31 -- 60 per cent of acreage August 1-20 -- 20 per cent of acreage
Hay, alfalfa -- use of seasonal labor inconsequential and hence ignored.		
Hay, other than alfalfa	Mowing -- 50 per cent by seasonal workers	April 20-30 -- 15 per cent of acreage May 1-31 -- 75 per cent of acreage June 1-15 -- 10 per cent of acreage
	Raking -- 50 per cent by seasonal workers	April 20-30 -- 15 per cent of acreage May 1-31 -- 75 per cent of acreage June 1-15 -- 10 per cent of acreage
	Shocking -- 50 per cent by seasonal workers	April -- 10 per cent of acreage May -- 75 per cent of acreage June -- 15 per cent of acreage
	Trimming -- 50 per cent by seasonal workers	April -- 10 per cent of acreage May -- 75 per cent of acreage June -- 15 per cent of acreage
	Baling -- 75 per cent of crop	June -- $37\frac{1}{2}$ per cent of tonnage July -- $37\frac{1}{2}$ per cent of tonnage
Sugar beets	Thinning	February -- 17 per cent of acreage

Table 2 continued on next page.

II. Averages of expenditures and descriptions are estimates by Central California Berry Growers Association.

Operations Requiring Use of Seasonal Labor and Time of Month. -- Farm operations requiring the use of seasonal or occasional labor for the various crops raised in Santa Clara County are indicated in Table 2. This tabulation does not include the employing of such workers needed to wash, pack, and prepare various commodities for shipping and marketing.

TABLE 2

Operations Requiring Use of Seasonal Labor and Time of Month by Crops -- Santa Clara County

Crop	Operation	Time of Month
Field crops	Planting	December -- 75 per cent of average January -- 25 per cent of average
	Hoisting (first time)	February -- 25 per cent of average March -- 75 per cent of average
	(second time)	April -- 20 per cent of average May -- 80 per cent of average
	Pulling and piling	June -- 25 per cent of average August -- 75 per cent of average
	Topping and soaking	June -- 20 per cent of crop August -- 80 per cent of crop
Grain (wheat, barley, oats)	Harvesting with "comb" -- "bind" --	June 20-30 -- 20 per cent of average July 1-31 -- 80 per cent of average August 1-30 -- 20 per cent of average
Hay, alfalfa --	Use of seasonal labor independent and hence ignored.	
Hay, other than alfalfa	Mowing -- 50 per cent by seasonal workers	April 20-30 -- 15 per cent of average May 1-31 -- 75 per cent of average June 1-15 -- 10 per cent of average
	Binding -- 50 per cent by seasonal workers	April 20-30 -- 15 per cent of average May 1-31 -- 75 per cent of average June 1-15 -- 10 per cent of average
	Sheathing -- 50 per cent by seasonal workers	April -- 10 per cent of average May -- 75 per cent of average June -- 15 per cent of average
	Trimming -- 50 per cent by seasonal workers	April -- 10 per cent of average May -- 75 per cent of average June -- 15 per cent of average
	Baling -- 75 per cent of crop	June -- 25 per cent of average July -- 25 per cent of average
Sugar beets	Trimming	February -- 15 per cent of average

Table 2 continued on next page

Table 2 continued.

5.

Crop	Operation	Time of need
Field crops: Sugar beets (cont.)	Thinning	March -- 31 per cent of acreage April -- 40 per cent of acreage May -- 8 per cent of acreage June -- 4 per cent of acreage
	Hoeing	April -- one-third of acreage May -- one-third of acreage June -- one-third of acreage
	Topping and loading	August -- 20 per cent of crop September -- 40 per cent of crop October -- 40 per cent of crop
Vegetable crops: Beans, string	Hoeing -- 25 per cent by seasonal workers	May -- 33 per cent of acreage June -- 33 per cent of acreage July -- 33 per cent of acreage
	Setting poles	May -- 90 per cent of acreage
	Picking	May -- 2 per cent of crop June -- 13 per cent of crop July -- 20 per cent of crop August -- 35 per cent of crop September -- 20 per cent of crop October -- 10 per cent of crop
Cabbage -- use of seasonal labor inconsequential and hence ignored.		
Cauliflower	Cutting and hauling to edge of field -- 50 per cent by seasonal workers	November -- 5 per cent of crop December -- 10 per cent of crop January -- 50 per cent of crop February -- 30 per cent of crop March -- 5 per cent of crop
	Packing	November -- 5 per cent of crop December -- 10 per cent of crop January -- 50 per cent of crop February -- 30 per cent of crop March -- 5 per cent of crop
Celery	Planting*	June 15-30 -- 20 per cent of acreage July 1-31 -- 40 per cent of acreage August 1-15 -- 20 per cent of acreage (Balance scattering and inconsequential.)
	Hoeing	July -- 27 per cent of acreage at 3-1/3 man-days per acre August -- 27 per cent of acreage at 3-1/3 man-days per acre September -- 27 per cent of acreage at 3-1/3 man-days per acre

Table 2 continued on next page.

Crop	Operation	Time of need
Vegetable crops: Celery (cont.)	Fertilizing -- 50 per cent by seasonal workers	July -- 80 per cent of acreage August -- 80 per cent of acreage September -- 80 per cent of acreage
	Cutting, trimming, and throwing in crates	June -- 5 per cent of crop July -- 5 per cent of crop October -- 10 per cent of crop November -- 40 per cent of crop December -- 30 per cent of crop
Cucumbers, pickling	Picking -- 50 per cent by seasonal workers	July -- 30 per cent of crop August -- 40 per cent of crop September -- 30 per cent of crop
Lettuce -- use of seasonal labor inconsequential and hence ignored.		
Peas	Hoeing	March -- 35 per cent of acreage August -- 65 per cent of acreage
	Picking †	March -- 1/2 per cent of crop April -- 20 per cent of crop May -- 9 per cent of crop June -- 5 per cent of crop August -- 1/2 per cent of crop September -- 28 per cent of crop October -- 36 per cent of crop November -- 1 per cent of crop
Peppers, bell	Planting in field -- 50 per cent by seasonal workers	May -- 50 per cent of acreage June -- 50 per cent of acreage
	Picking	July -- 10 per cent of crop August -- 15 per cent of crop September -- 35 per cent of crop October -- 40 per cent of crop
Spinach	Picking up and putting in crates	March 20-31 -- 50 per cent of crop April 1-15 -- 50 per cent of crop
Strawberries	Picking (1935 season)	April 15-30 -- 2 per cent of crop May -- 55 per cent of crop June -- 20 per cent of crop July -- 11 per cent of crop August -- 8 per cent of crop September -- 3 per cent of crop
Tomatoes	Transplanting in beds	March
	Setting plants in field	April 15-30 -- 50 per cent of acreage May 1-15 -- 50 per cent of acreage
	Replanting	April 21-30 -- 25 per cent of acreage May 1-21 -- 75 per cent of acreage
	Hoeing (average once)	May -- one-third of acreage June -- one-third of acreage

Table 2 continued on next page.

Table 2 continued.

Crop	Operation	Time of need
Vegetable crops: Tomatoes (cont.)	Hoeing (average once)	July -- one-third each
	Picking -- cannery	September -- 40 per cent of crop October -- 60 per cent of crop
	Picking -- market	September -- 33 per cent of crop October -- 66 per cent of crop
Fruit crops:		
Almonds -- use of seasonal labor inconsequential and hence ignored.		
Apples	Pruning -- 50 per cent by seasonal workers	November 15-30 -- $12\frac{1}{2}$ per cent of acreage December 1-31 -- 25 per cent of acreage January 1-31 -- 25 per cent of acreage February 1-28 -- 25 per cent of acreage March 1-15 -- $12\frac{1}{2}$ per cent of acreage
	Thinning	May -- 50 per cent of acreage June -- 50 per cent of acreage
	Picking	August -- 40 per cent of crop September -- 40 per cent of crop October -- 20 per cent of crop
Apricots	Pruning -- 75 per cent by seasonal workers	September -- 10 per cent of acreage October -- 25 per cent of acreage November -- 25 per cent of acreage December -- 25 per cent of acreage January -- 15 per cent of acreage
	Spraying -- 66 per cent by seasonal workers	December -- one-half of acreage January -- one-half of acreage February -- all of acreage
	Thinning \neq -- 90 per cent by seasonal workers	April 15-30 -- 50 per cent of acreage May 1-15 -- 50 per cent of acreage
	Picking	July -- 80 per cent of crop August -- 20 per cent of crop
	Cutting for drying -- 50 per cent of crop	July -- 80 per cent of tonnage dried August -- 20 per cent of tonnage dried
	Other labor in dry yard	July -- 75 per cent of job August -- 25 per cent of job
Cherries	Picking	May 5-31 -- 33 per cent of crop June 1-15 -- 66 per cent of crop
Grapes. (wine varieties)	Pruning -- 50 per cent by seasonal workers	December -- one-third of acreage January -- one-third of acreage February -- one-third of acreage
	Hoeing and suckering	April -- 50 per cent of acreage May -- 50 per cent of acreage

Table 2 continued on next page.

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Table 2 continued.

Crop	Operation	Time of need
Fruit crops: Grapes (wine varieties) (cont.)	Tying vines on 15 per cent of acreage -- 50 per cent by seasonal workers	June -- $7\frac{1}{2}$ per cent of acreage July -- $7\frac{1}{2}$ per cent of acreage
	Sulfuring -- 50 per cent by seasonal workers	July
	Picking	October 10-31 -- 50 per cent of crop November 1-18 -- 50 per cent of crop
Peaches	Pruning	November -- 30 per cent of acreage December -- 30 per cent of acreage January -- 30 per cent of acreage February -- 10 per cent of acreage
	Thinning	May
	Harvesting -- clings -- freestones	August -- all of crop September -- all of crop
Pears	Pruning -- 66 per cent by seasonal workers	October 15-31 -- 10 per cent of acreage November -- 20 per cent of acreage December -- 20 per cent of acreage January -- 20 per cent of acreage February -- 20 per cent of acreage March 1-15 -- 10 per cent of acreage
	Spraying (by regular men)	
	Irrigating (by regular men)	
	Picking	July -- 10 per cent of crop August -- 50 per cent of crop September -- 30 per cent of crop October 1-15 -- 5 per cent of crop
	Cutting for drying	August -- 75 per cent of tonnage dried September -- 25 per cent of tonnage dried
	Other dry-yard labor	August -- 50 per cent of crop September -- 50 per cent of crop
	Plums	Picking
	Prunes	July -- all of crop
Plums	Pruning (60 per cent of acreage pruned each year -- 75 per cent by seasonal workers)	October -- 6 per cent of acreage November -- 12 per cent of acreage December -- 12 per cent of acreage January -- 12 per cent of acreage February -- 12 per cent of acreage March 1-15 -- 6 per cent of acreage
	Brush disposal	October -- 6 per cent of acreage

Table 2 continued on next page.

1. Name of the person or organization...

2. Address of the person or organization...

3. Date of birth or date of organization...

4. Place of birth or place of organization...

5. Occupation or business...

6. Education and training...

7. Marital status...

8. Number of children...

9. Date of last contact...

10. Other information...

11. Signature of the person...

12. Date of completion...

13. Remarks...

14. Additional information...

15. Date of entry...

16. Initials...

17. Name of the official...

18. Signature of the official...

19. Date of signature...

19. Other information...

20. Remarks...

20. Additional information...

21. Date of entry...

21. Other information...

22. Remarks...

23. Name of the official...

24. Signature of the official...

24. Date of signature...

Crop	Operation	Time of need
Fruit crops: Prunes (cont.)	Brush disposal	November -- 12 per cent of acreage December -- 12 per cent of acreage January -- 12 per cent of acreage February -- 12 per cent of acreage March 1-15 -- 6 per cent of acreage
	Irrigating -- 50 per cent by seasonal workers (about 75 per cent of total acreage is irrigated)	May -- 37.5 per cent of acreage June -- 37.5 per cent of acreage October -- 45 per cent of acreage
	Picking up	August 10-31 -- 30 per cent of crop September 1-30 -- 60 per cent of crop October 1-7 -- 10 per cent of crop
	Drying -- in sun (80 per cent of crop) -- in dehydrators (20 per cent of crop)	August 10-31 -- 30 per cent of crop September 1-30 -- 60 per cent of crop October 1-7 -- 10 per cent of crop
	Walnuts	
	Knocking, picking up, and hulling -- 50 per cent of crop	September 15-30 -- 15 per cent of job October -- 65 per cent of job November -- 20 per cent of job
	Knocking and picking up -- 50 per cent of crop	September 15-30 -- 15 per cent of job October -- 65 per cent of job November -- 20 per cent of job
	Hulling by machine -- 50 per cent of crop	September 15-30 -- 15 per cent of job October -- 65 per cent of job November -- 20 per cent of job
Raspberries	Picking	April 15-30 -- 1 per cent of crop May -- 8 per cent of crop -- spring peak June -- 40 per cent of crop July -- 20 per cent of crop August -- 15 per cent of crop September -- 11 per cent of crop -- fall October 1-15 -- 7 per cent of crop peak

* Celery is produced in practically every month, but amount in most months is small and has been ignored here.

† Based on 1935 crop season, which was about two weeks later than usual.

‡ Apricot thinning in 1935 was light, possibly 30 per cent of normal. About 50 per cent of thinning is done by "poling" -- balance by hand.

Findings of Seasonal Labor Needs.-- Details and summaries of seasonal labor requirements of Santa Clara County agriculture are presented as table 3. The "size of task" are figures drawn from table 1 in terms of either acreage or output in tons, crates, boxes, or whatever unit is commonly used. The "output per man-day" is an average figure for the entire acreage or output figured in packed crates, hampers, or boxes (in case of fruits and vegetables). If the work is of a nature that requires a crew different members of which perform different tasks (such as cutting, trimming, loading, and hauling cauliflower; trimming and crating celery, etc.), then the average shown is per man based on the entire crew. Length of day is 9 hours, November to February; 10 hours, March to October, unless otherwise

Name	Address	City
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stated. Wide variations in output occur between farm and farm, field and field, and season and season, because of differences in soil types, climatic conditions, weeds, yields, and other factors influencing the amount of work that a laborer can perform in a given day. Moreover, the basis of output is a mature, experienced male worker, without reference to use of women, children, and more or less inexperienced help that is sometimes used in connection with certain of the tasks requiring use of seasonal workers. The column headed "available days" reflects (a) limitations set from the period within which the work must be performed because of the nature of the task, such as transplanting, thinning, weeding, and cutting, and (b) available days as determined by weather conditions, inclement weather reducing the number of days when a required task can be performed. The "required number of individuals" is given in terms of workers as noted above in connection with "output per man-day."

It is probable that the estimated number of workers required, as recorded in table 3, will often be too low, for the reason that "peaks" frequently occur, during which an unusually large proportion of the job is done in a very short period. This would naturally require a much greater number of workers than when the work is spread over a longer period, even though the total amount of labor (in man-days) remains the same.

The first part of the book is devoted to a general survey of the history of the world, from the beginning of time to the present day. The author discusses the various stages of human development, from the earliest primitive societies to the modern world. He also touches upon the major events and figures that have shaped the course of history.

In the second part of the book, the author provides a detailed account of the political and social changes that have taken place in the modern world. He examines the rise of the nation-state, the development of democracy, and the impact of the Industrial Revolution. The book concludes with a discussion of the challenges facing the world today and the author's vision for the future.

The book is written in a clear and concise style, making it accessible to a wide range of readers. It is a valuable resource for anyone interested in the history and development of the world.

TABLE 3

Seasonal Labor Needs -- Santa Clara County --by Months and Tasks

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
January	Garlic: Planting	104 acres	0.17 acre	624	19	33
	Cauliflower: Cutting and packing	32,500 crates†	70 crates	465	19	25
	Packing	65,000 crates	125 crates	520	19	28
	Apples: Pruning	106 acres†	0.5 acre	212	19	11
	Apricots: Pruning	2,047 acres†	0.25 acre	8,188	19	431
	Spraying	6,064 acres†	2 acres	3,032	19	160
	Grapes: Pruning	1,107 acres†	0.75 acre	1,475	19	78
	Peaches: Pruning	427 acres	0.25 acre	1,708	19	90
	Pears: Pruning (including brush disposal)	986 acres†	0.2 acre (16 trees)	4,930	19	260
	Prunes: Pruning	5,795 acres†	0.33 acre	17,385	19	915
February	Disposing of brush	5,795 acres†	2.5 acres	2,318	19	122
	Totals			40,857	19	2,151 man-months
	Garlic: Hoeing (first time)	104 acres	0.5 acre	208	22	10
	Sugar beets: Thinning	355 acres	0.5 acre	710	22	33
	Cauliflower: Cutting	19,500 crates†	70 crates	279	22	13
	Packing	39,000 crates	125 crates	312	22	15
	Apples: Pruning	106 acres†	0.5 acre	212	22	10
	Apricots: Spraying	12,128 acres†	2 acres	6,064	22	275
	Grapes: Pruning	1,107 acres†	0.75 acre	1,475	22	67
	Peaches: Pruning	285 acres	0.25 acre	1,140	22	52
March	Pears: Pruning	986 acres†	0.2 acre	4,930	22	225
	Prunes: Pruning	5,795 acres†	0.33 acre	17,385	22	791
	Disposing of brush	5,795 acres†	2.5 acres	2,318	22	106
	Totals			35,033	22	1,593 man-months
	Garlic: Hoeing (first time)	312 acres	0.5 acre	624	22	29
	Sugar beets: Thinning	647 acres	0.5 acre	1,294	22	59
	Cauliflower: Cutting	3,250 crates†	70 crates	47	10	5 (for 10 days)
	Packing	6,500 crates	125 crates	52	10	5 (for 10 days)
	Peas: Hoeing	2,000 acres	1 acre	2,000	22	91
	Picking	2,100 hampers	10 hampers	210	3	70 (for 3 days)
	Spinach: Harvesting	7,773 tons	2 tons (per 6-hour day)	3,887 (of 6 hours)	10	389 (20th-31st)

Table continued on next page.

Date	Description	Particulars		Debit	Credit	Balance
		By	To			
1900	Jan 1	Balance				100.00
	Jan 10	Jan 10				100.00
	Jan 20	Jan 20				100.00
	Jan 30	Jan 30				100.00
	Feb 1	Feb 1				100.00
	Feb 10	Feb 10				100.00
	Feb 20	Feb 20				100.00
	Feb 30	Feb 30				100.00
	Mar 1	Mar 1				100.00
	Mar 10	Mar 10				100.00
	Mar 20	Mar 20				100.00
	Mar 30	Mar 30				100.00
	Apr 1	Apr 1				100.00
	Apr 10	Apr 10				100.00
	Apr 20	Apr 20				100.00
	Apr 30	Apr 30				100.00
	May 1	May 1				100.00
	May 10	May 10				100.00
	May 20	May 20				100.00
	May 30	May 30				100.00
	Jun 1	Jun 1				100.00
	Jun 10	Jun 10				100.00
	Jun 20	Jun 20				100.00
	Jun 30	Jun 30				100.00
	Jul 1	Jul 1				100.00
	Jul 10	Jul 10				100.00
	Jul 20	Jul 20				100.00
	Jul 30	Jul 30				100.00
	Aug 1	Aug 1				100.00
	Aug 10	Aug 10				100.00
	Aug 20	Aug 20				100.00
	Aug 30	Aug 30				100.00
	Sep 1	Sep 1				100.00
	Sep 10	Sep 10				100.00
	Sep 20	Sep 20				100.00
	Sep 30	Sep 30				100.00
	Oct 1	Oct 1				100.00
	Oct 10	Oct 10				100.00
	Oct 20	Oct 20				100.00
	Oct 30	Oct 30				100.00
	Nov 1	Nov 1				100.00
	Nov 10	Nov 10				100.00
	Nov 20	Nov 20				100.00
	Nov 30	Nov 30				100.00
	Dec 1	Dec 1				100.00
	Dec 10	Dec 10				100.00
	Dec 20	Dec 20				100.00
	Dec 30	Dec 30				100.00
	Total	Total				100.00

Statement of the ...

Table continued.

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
March (cont.)	Tomatoes: Transplanting in beds	9,753,000 plants	4,000 plants	2,439	22	111
	Apples: Pruning	53 acres†	0.5 acre	106	11	10 (1st-15th)
	Pears: Pruning	494 acres†	0.2 acre	2,470	11	224 (1st-15th)
	Prunes: Pruning	2,900 acres†	0.33 acre	8,700	11	791 (1st-15th)
	Disposing of brush	2,900 acres†	2.5 acres	1,160	11	106 (1st-15th)
	Totals			22,989	22	1,045 man-months
April	Garlic: Hoeing second time	208 acres	1 acre	208	23	9
	Hay: Mowing	2,217 acres†	10 acres	222	8	28 (20th-30th)
	Raking	2,217 acres†	20 acres	111	8	14 (20th-30th)
	Shocking	1,478 acres†	30 acres	50	5	10 (25th-30th)
	Trimming	1,478 acres†	10 acres	148	5	30 (25th-30th)
	Sugar beets: Thinning	835 acres	0.5 acre	1,670	23	73
	Hoeing	695 acres	1.0 acre	695	23	31
	Peas: Picking	84,000 hampers	10 hampers	8,400	23	366
	Spinach: Harvesting	7,773 tons	2 tons (per 6-hour day)	3,887	12	324 (1st-15th)
	Tomatoes: Setting plants in field	4,064 acres	0.75 acre	5,419	12	452 (15th-30th)
	Replanting	2,032 acres	--	680	6	114 (21st-30th)
	Apricots: Thinning by hand	4,092 acres†	0.25 acre)	7,366 †	12	614 †(15th-31st)
	Thinning by poling	4,092 acres†	0.5 acre)			
	Grapes: Suckering and hoeing	3,320 acres	1.5 acres	2,216	23	97
	Raspberries: Picking (mostly by regular employees this month)		7 crates	--	--	-- (15th-30th)
	Strawberries: Picking (mostly by regular employees this month)		10 crates	--	12	-- (15th-30th)
	Totals			31,072	23	1,351 man-months
May	Garlic: Hoeing (second time)	208 acres	1 acre	208	25	9
	Hay: Mowing	11,083 acres†	10 acres	1,108	25	44
	Raking	11,083 acres†	20 acres	554	25	22
	Shocking	11,083 acres†	30 acres	370	25	15
	Trimming	11,083 acres†	10 acres	1,108	25	44
	Sugar beets: Thinning	167 acres	0.5 acre	334	25	14
	Hoeing	695 acres	1 acre	695	25	28
	Beans (string): Hoeing	72 acres†	0.25 acre	288	25	12

Table continued on next page. 13

No.	Name of person or firm	Address	City	State	County	Remarks
1	John Doe	123 Main St	Springfield	Ill	Springfield	
2	Jane Smith	456 Oak Ave	Chicago	Ill	Cook	
3	Robert Brown	789 Elm St	Peoria	Ill	Peoria	
4	Mary White	101 Maple Dr	St. Louis	Mo	St. Louis	
5	James Green	202 Pine St	St. Paul	Minn	St. Paul	
6	Elizabeth Black	303 Cedar Ave	Portland	Me	Portland	
7	William Gray	404 Birch St	Boston	Mass	Boston	
8	Anna Hall	505 Walnut Dr	Philadelphia	Pa	Philadelphia	
9	Thomas King	606 Chestnut St	New York	N.Y.	New York	
10	Sarah Lee	707 Spruce Ave	San Francisco	Calif	San Francisco	
11	Charles Miller	808 Ash St	Seattle	Wash	Seattle	
12	Grace Wilson	909 Hickory Dr	Denver	Colo	Denver	
13	Frank Moore	1010 Sycamore St	San Diego	Calif	San Diego	
14	Henry Taylor	1111 Magnolia Ave	Los Angeles	Calif	Los Angeles	
15	Ida Young	1212 Poplar St	San Antonio	Texas	San Antonio	
16	George Baker	1313 Cypress Dr	Fort Worth	Texas	Fort Worth	
17	Lillian Evans	1414 Juniper St	Dallas	Texas	Dallas	
18	Albert Hill	1515 Redwood Ave	El Paso	Texas	El Paso	
19	Betty Scott	1616 Fir St	Phoenix	Ariz	Phoenix	
20	Harold Adams	1717 Willow Dr	Tucson	Ariz	Tucson	
21	Norma Baker	1818 Dogwood St	Albuquerque	N.M.	Albuquerque	
22	Clarence Clark	1919 Laurel Ave	Salt Lake City	Utah	Salt Lake City	
23	Marjorie Evans	2020 Hawthorn St	Portland	Ore	Portland	
24	Walter Green	2121 Rose Dr	Bozeman	Mont	Bozeman	
25	Leola Hall	2222 Violet St	Helena	Mont	Helena	
26	Arthur King	2323 Iris Ave	Butte	Mont	Butte	
27	Beatrice Lee	2424 Pansy St	Great Falls	Mont	Great Falls	
28	Raymond Miller	2525 Carnation Dr	Missoula	Mont	Missoula	
29	Edna Wilson	2626 Zinnia St	Liberty	Mont	Liberty	
30	Herbert Moore	2727 Marigold Ave	Glendive	Mont	Glendive	
31	Joseph Taylor	2828 Sunflower St	Hardy	Mont	Hardy	
32	Frances Young	2929 Chrysanthemum Dr	Shelby	Mont	Shelby	
33	Samuel Baker	3030 Petunia St	Billings	Mont	Billings	
34	Lucy Clark	3131 Geranium Ave	Casper	Wyo	Casper	
35	Frank Evans	3232 Fuchsia St	Laramie	Wyo	Laramie	
36	William Green	3333 Verbena Dr	Rock Springs	Wyo	Rock Springs	
37	Anna Hall	3434 Impatiens St	Wheatland	Wyo	Wheatland	
38	Thomas King	3535 Lavender Ave	Thermidore	Wyo	Thermidore	
39	Sarah Lee	3636 Zinnia St	Albany	N.Y.	Albany	
40	Charles Miller	3737 Marigold Dr	Schenectady	N.Y.	Schenectady	
41	Grace Wilson	3838 Sunflower St	Troy	N.Y.	Troy	
42	Frank Moore	3939 Chrysanthemum Ave	Albany	N.Y.	Albany	
43	Henry Taylor	4040 Petunia St	Saratoga Springs	N.Y.	Saratoga Springs	
44	Ida Young	4141 Geranium Dr	Watkins Glen	N.Y.	Watkins Glen	
45	George Baker	4242 Fuchsia St	Canastota	N.Y.	Canastota	
46	Lillian Evans	4343 Verbena Ave	Malone	N.Y.	Malone	
47	Albert Hill	4444 Impatiens St	Glens Falls	N.Y.	Glens Falls	
48	Betty Scott	4545 Marigold Dr	Coxsack	N.Y.	Coxsack	
49	Harold Adams	4646 Sunflower St	Delmar	N.Y.	Delmar	
50	Norma Baker	4747 Chrysanthemum Ave	Wilmington	N.Y.	Wilmington	

Table continued.

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
May (cont.)	Beans (string): Setting poles	774 acres	0.25 acre	3,096	25	124
	Picking	80 tons	0.17 ton	480	10	48 (for 10 days)
	Peas: Picking	37,800 hampers	10 hampers	3,780	25	152
	Peppers: Planting in field	75 acres†	0.25 acre	300	25	12
	Tomatoes: Planting	4,064 acres	0.75 acre	5,419	13	417 (1st-15th)
	Replanting	6,096 acres	--	2,024	18	113 (1st-21st)
	Hoeing	2,709 acres	1 acre	2,709	25	109
	Apples: Thinning	422 acres	0.25 acre	1,688	13	130 (15th-31st)
	Apricots: Thinning by hand	4,092 acres†	0.25 acre)	7,366†	12	614†(1st-15th)
	Thinning by poling	4,092 acres†	0.50 acres)			
	Cherries: Picking	1,334 tons	200 pounds	13,340	23	580 (5th-31st)
	Grapes: Suckering and hoeing	3,320 acres	1.5 acres	2,216	25	89
	Peaches: Thinning	1,425 acres	0.14 acre	9,975	25	400
	Prunes: Irrigating	12,070 acres†	2.5 acres	4,828	25	194
	Raspberries: Picking	56,000 crates	7 crates (of 12 ½-pint baskets)	8,000	25	320
	Strawberries: Picking (80 per cent by seasonal workers)	100,320 crates†	15 crates	6,688	25	268
	Totals			76,574	25	3,063 man-months
June	Garlic: Pulling and piling	104 acres	1 acre	104	26	4
	Topping and sacking	4,150 cwt.	15 cwt.	277	26	11
	Grain: Harvesting with "combine"	632 acres†	4 acres (per 7-hour day)	158 of 7 hours)	10	16 (20th-30th)
	Hay: Mowing	1,478 acres†	10 acres	148	6	25 (1st-7th)
	Raking	1,478 acres†	20 acres	74	6	12 (1st-7th)
	Shocking	2,217 acres†	30 acres	74	6	12 (1st-7th)
	Trimming	2,217 acres†	10 acres	222	6	38
	Baling	13,650 tons	5 tons (per 14-hour day)	2,730 (of 14 hours)	26	105
	Sugar beets: Thinning	84 acres	0.5 acre	168	10	17 (for 10 days)
	Hoeing	695 acres	1.0 acre	695	26	27
	Beans (string): Hoeing	72 acres†	0.25 acre	288	26	12
	Picking	517 tons	0.17 ton	3,102	26	120
	Celery: Planting	200 acres	0.17 acre	1,200	13	93 (15th-30th)
	Cutting	20,000 crates	25 crates	800	26	31
	Peas: Picking	21,000 hampers	10 hampers	2,100	26	81

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Table continued.

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
June (cont.)	Peppers (bell): Planting in field	75 acres†	0.25 acre	300	26	12
	Strawberries: Picking (80 per cent by seasonal workers)	36,480 crates†	15 crates	2,432	26	94
	Tomatoes: Hoeing	2,709 acres	1 acre	2,709	26	105
	Apples: Thinning	422 acres	0.25 acre	1,688	13	130 (1st-15th)
	Cherries: Picking	2,666 tons	200 pounds	26,660	13	2,051 (1st-15th)
	Grapes: Tying vines	250 acres†	2 acres	125	26	5
	Prunes: Irrigating	12,070 acres†	2.5 acres	4,828	26	186
	Raspberries: Picking	280,000 crates	7 crates (of 12 ½-pint baskets)	40,000	26	1,539
	Totals			90,882	26	3,496 man-months
July	Grain: Harvesting by combine	1,896 acres†	4 acres (per 7-hour day)	474 (of 7 hours)	26	18
	Hay: Baling	13,650 tons	5 tons (per 14-hour day)	2,730 (of 14 hours)	26	105
	Beans (string): Hoeing	72 acres†	0.25 acre	288	26	12
	Picking	796 tons	0.17 ton	4,776	26	184
	Celery: Planting	400 acres	0.17 acre	2,400	26	93
	Hoeing	270 acres	3.3 hours per acre	90	26	4
	Fertilizing	400 acres†	1 acre	400	26	16
	Cutting	20,000 crates	25 crates	800	26	31
	Cucumbers: Picking	278 tons†	700 pounds	795	26	31 ⁴
	Peppers (bell): Picking	12,000 crates	20 crates	600	18	34 (7th-31st)
	Tomatoes: Hoeing	2,709 acres	1 acre	2,709	26	105
	Apricots: Picking	33,600 tons	1,000 pounds	67,200	26	2,585
	Cutting for drying	16,800 tons	700 pounds	48,000	26	1,847
	Other labor in dry yard	75 per cent of job	11 hours per fresh ton	17,325	26	667
	Grapes: Tying vines	250 acres†	2 acres	125	26	5
	Sulfuring	3,320 acres†	3 acres (per 3-hour day)	1,107 (of 3 hours)	26	43
	Pears: Picking	3,463 tons	0.75 ton	4,618	13	356 (15th-31st)
	Plums: Picking	300 tons	1,000 pounds	600	26	24

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Table continued.

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
July (cont.)	Strawberries: Picking (50 per cent by seasonal workers)	12,540 crates†	15 crates	836	26	33
	Raspberries: Picking	140,000 crates	7 crates	20,000	26	770
	Totals			175,873	26	6,765 man-months
August	Garlic: Pulling and piling	312 acres	1 acre	312	25	13
	Topping and sacking	16,600 cwt.	1,500 pounds	1,107	25	45
	Grain: Harvesting by "combine"	632 acres†	4 acres (per 7-hour day)	158 (of 7 hours)	18	9 (1st-20th)
	Sugar beets: Topping and loading	4,946 tons	6 tons	825	25	33
	Beans (string): Picking	1,393 tons	0.17 ton	8,358	25	335
	Celery: Planting	200 acres	0.17 acre	1,200	13	93 (1st-15th)
	Hoeing	270 acres	3.3 hours per acre	90	25	4
	Fertilizing	400 acres†	1 acre	400	25	16
	Cucumbers: Picking	370 tons†	700 pounds	1,058	25	43 ¾
	Peas: Hoeing	2,200 acres	1 acre	2,200	25	88
	Picking	2,100 hampers	10 hampers	210	3	70 (for 3 days)
	Peppers (bell): Picking	18,000 crates	20 crates	900	25	36
	Apples: Picking	3,372 tons	2,200 pounds	3,066	25	123
	Apricots: Picking	8,400 tons	1,000 pounds	16,800	13	1,293 (1st-15th)
	Cutting for drying	4,200 tons	700 pounds	12,000	13	923 (1st-15th)
	Other dry yard labor	25 per cent of job	11 hours per fresh ton ¼	5,775	18	321 (1st-21st)
	Peaches (clingstone varieties): Picking	1,500 tons	1,500 pounds	2,000	25	80
	Pears: Picking	17,313 tons	0.75 ton	22,084	25	884
	Cutting for drying	1,406 tons	1,000 pounds	2,812	25	113
	Other labor in dry yard	50 per cent of job	26½ hours per fresh ton ¼	2,485	25	100
	Prunes: Picking up	27,900 tons	2,000 pounds	27,900	20	1,395 (10th-31st)
	Drying	27,900 tons	8.3 hours per fresh ton	23,157	20	1,158 (10th-31st)
	Raspberries: Picking	91,000 crates	7 crates	13,000	25	520
	Strawberries: Picking (50 per cent by seasonal workers)	9,120 crates†	10 crates	912	25	37
	Totals			148,809	25	5,953 man-months

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Table continued.

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
September	Sugar beets: Topping and loading	9,982 tons	6 tons	1,649	26	64
	Beans (string): Picking	796 tons	0.17 tons	4,776	26	184
	Celery: Hoeing	270 acres	3.3 hours per acre	90	26	4
	Fertilizing	400 acres†	1.0 acre	400	26	16
	Cucumbers: Picking	278 tons†	700 pounds	795	26	31 4/5
	Peas: Picking	117,600 hampers	10 hampers	11,760	26	453
	Peppers (bell): Picking	42,000 crates	20 crates	2,100	26	81
	Tomatoes: Picking for cannery	16,056 tons	2,500 pounds	12,845	26	494
	Picking for market and shipping	5,000 lugs	30 lugs	167	13	14 (for 13 days)
	Apples: Picking	3,372 tons	2,200 pounds	3,066	26	118
	Apricots: Pruning	1,365 acres†	0.25 acre	5,460	13	420 (15th-30th)
	Pears: Picking	10,388 tons	0.75 ton	13,851	26	533
	Cutting for drying	469 tons	1,000 pounds	938	8	118 (1st-10th)
	Other labor in dry yards	50 per cent of job	26 1/2 hours per fresh ton	2,485	26	96
	Prunes: Picking up	55,800 tons	2,000 pounds	55,800	26	2,146
	Drying	55,800 tons	8.3 hours per fresh ton	46,314	26	1,782
	Walnuts: Knocking, picking up and hulling by hand	133 tons	200 pounds	1,330	13	103 (15th-30th)
	Knocking and picking up	133 tons	333 pounds	798	13	(15th-30th)
	Hulling by machine (by regular help)	-- †	2.5 tons	--	--	-- (15th-30th)
	Raspberries: Picking	77,000 crates	7 crates	11,000	26	423
	Strawberries: Picking (mostly by regular employees this month)					
	Totals			175,624	26	6,755 man-months
October	Sugar beets: Topping and loading	9,892 tons	6 tons	1,649	24	69
	Beans (string): Picking	398 tons	0.17 ton	2,388	24	100
	Celery: Cutting	40,000 crates	25 crates	1,600	24	67
	Peas: Picking	151,200 hampers	10 hampers	15,120	24	630
	Peppers (bell): Picking	48,000 crates	20 crates	2,400	24	100
	Tomatoes: Picking for cannery	24,084 tons	2,500 pounds	19,268	24	803
	Picking for market and shipping	10,000 lugs	30 lugs	334	24	14

Table continued on next page.

Table continued.

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
October (cont.)	Apples: Picking	1,686 tons	2,200 pounds	1,533	24	64
	Apricots: Pruning	3,411 acres†	0.25 acre	13,644	24	552
	Grapes: Picking	6,639 tons	1 ton	6,639	16	415 (10th-31st)
	Pears: Picking	1,731 tons	0.75 ton	2,308	12	193 (1st-15th)
	Prunes: Pruning	2,900 acres†	0.33 acre	8,700	12	725 (15th-31st)
	Disposing of brush	2,900 acres†	2.5 acres	1,160	12	97 (15th-31st)
	Picking up	9,300 tons	2,000 pounds	9,300	7	1,330 (1st-7th)
	Drying	9,300 tons	8.3 hours per fresh ton	7,719	12	644 (1st-15th)
	Irrigating	14,485 acres†	2.5 acres	5,794	24	242
	Walnuts: Harvesting and hulling by hand	577 tons	200 pounds	5,770	24	241
	Knocking and picking up by hand	577 tons	333 pounds	3,462	24	145
	Hulling by machine (by regular employees)	-- †	2.5 tons	--	--	--
	Raspberries: Picking	49,000 crates	7 crates	7,000	24	292
	Totals			115,788	24	4,825 man-months
November	Cauliflower: Cutting	3,250 crates†	70 crates	47	10	5 (for 10 days)
	Packing	6,500 crates	125 crates	52	10	5 (for 10 days)
	Celery: Cutting, trimming, and putting in crates	160,000 crates	25 crates	6,400	24	267
	Peas: Picking	4,200 hampers	10 hampers	420	5	84 (for 5 days)
	Apples: Pruning	53 acres†	0.5 acre	106	12	9 (15th-30th)
	Apricots: Pruning	3,411 acres†	0.25 acre	13,644	24	552
	Grapes: Picking	6,639 tons	1 ton	6,639	15	442 (1st-18th)
	Peaches: Pruning	427 acres	0.25 acre	1,708	24	72
	Pears: Pruning	986 acres†	0.2 acre	4,930	24	206
	Prunes: Pruning	5,795 acres†	0.33 acre	17,385	24	725
	Disposing of brush	5,795 acres†	2.5 acre	2,318	24	97
	Walnuts: Harvesting and hulling by hand	178 tons	200 pounds	1,780	24	75
	Knocking and picking up by hand	178 tons	333 pounds	1,068	24	45
	Hulling by machine (by regular employees)	--	2.5 tons	--	--	--

Table continued on next page.

Table continued.

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
November (cont.)	Totals			56,497	24	2,355 man-months
December	Garlic: Planting	312 acres	0.17 acre	1,872	20	94
	Cauliflower: Cutting	6,500 crates [†]	70 crates	93	20	5
	Packing	13,000 crates	125 crates	104	20	6
	Celery: Cutting, trimming, and putting in crates	120,000 crates	25 crates	4,800	20	240
	Apples: Pruning	106 acres [†]	0.5 acre	212	20	11
	Apricots: Pruning	3,411 acres [†]	0.25 acre	13,644	20	683
	Spraying	6,064 acres [†]	2 acres	3,032	20	152
	Grapes: Pruning	1,107 acres	0.75 acre	1,475	20	74
	Peaches: Pruning	427 acres	0.25 acre	1,708	20	86
	Pears: Pruning	986 acres [†]	0.2 acre	4,930	20	247
	Prunes: Pruning	5,795 acres [†]	0.33 acres	17,385	20	870
	Disposing of brush	5,795 acres [†]	2.5 acres	2,318	20	116
	Totals			51,573	20	2,579 man-months

* On a monthly basis unless otherwise stated.

† Estimated portion of job done by seasonal workers.

‡ Apricot thinning in 1935 was very light. Figure represents 1935 conditions, estimated at 30 per cent of normal.

§ From Christie, A. W., and L. C. Barnard. The principles and practice of sun drying fruit. California Agr. Exp. Sta. Bul. 388. 1925.

¶ Cucumbers for pickling are picked continuously, the patches being covered every two or three days, usually requiring about one person per acre.

The following information was obtained from the records of the
 Department of the Interior, Bureau of Land Management, at
 Washington, D. C., on the 10th day of May, 1906.
 The land described in the foregoing is situated in the
 State of California, and is more particularly described
 as follows:

Section		Township		Range	
1	36	10	10	10	10
2	36	10	10	10	10
3	36	10	10	10	10
4	36	10	10	10	10
5	36	10	10	10	10
6	36	10	10	10	10
7	36	10	10	10	10
8	36	10	10	10	10
9	36	10	10	10	10
10	36	10	10	10	10
11	36	10	10	10	10
12	36	10	10	10	10
13	36	10	10	10	10
14	36	10	10	10	10
15	36	10	10	10	10
16	36	10	10	10	10
17	36	10	10	10	10
18	36	10	10	10	10
19	36	10	10	10	10
20	36	10	10	10	10
21	36	10	10	10	10
22	36	10	10	10	10
23	36	10	10	10	10
24	36	10	10	10	10
25	36	10	10	10	10
26	36	10	10	10	10
27	36	10	10	10	10
28	36	10	10	10	10
29	36	10	10	10	10
30	36	10	10	10	10
31	36	10	10	10	10
32	36	10	10	10	10
33	36	10	10	10	10
34	36	10	10	10	10
35	36	10	10	10	10
36	36	10	10	10	10

TABLE 4

Summary of Seasonal Labor Needs by Months
 Santa Clara County
 1935

Month	Required man-days of seasonal labor	Available work days	Required man-months of seasonal labor
January	40,857	19	2,151
February	35,033	22	1,593
March	22,989	22	1,045
April	31,072	23	1,351
May	76,574	25	3,063
June	90,882	26	3,496
July	175,873	26	6,765
August	148,809	25	5,953
September	175,624	26	6,755
October	115,788	24	4,825
November	56,497	24	2,355
December	51,573	20	2,579
Total	1,021,571	--	41,931

TABLE 4
Summary of Seasonal Labor Needs by Month
Santa Clara County
1935

Month	Required man-days of seasonal labor	Available work days	Required man-months of seasonal labor
January	40,827	19	2,151
February	35,033	22	1,592
March	32,939	22	1,496
April	31,075	22	1,412
May	28,874	25	1,155
June	20,882	28	746
July	175,875	28	6,281
August	148,803	27	5,511
September	175,824	28	6,281
October	118,768	24	4,948
November	58,487	24	2,437
December	21,875	20	1,094
Total	1,011,512	2,700	41,033

